

## ***Interactive comment on “Importance of spatial and depth-dependent drivers in groundwater level modeling through machine learning” by Pragnaditya Malakar et al.***

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The authors have treated an interesting topic dealing with groundwater in a large trans-boundary aquifer between India and Bangladesh for the purpose of highlighting the influence of various triggers; natural and anthropogenic that act and harm this groundwater. The investigation is carried out by the use of machine learning methods (support vector machines and artificial neural network). The application of this kind of modeling constitutes a novelty for groundwater in the studied basin. The title is appropriate for the content of the paper, however, it will be better if they add an indication about the study area. The abstract summarizes the main information of the paper and highlights

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the main finding. The paper is well written and balanced. However, the article contains imperfections such as: – The authors repeatedly cited Figures S1 up to S17 (line 263) and Tables S1 to S11 (example line 282, 283) but in the list of figures and tables below those illustrations are missing. – Line 47 they wrote: south-east India (Bengal basin), maybe they rather say North-east India. – Line 49, do “Summer” and “winter” correspond to “Rabi” and “Kharif” respectively. – Line 54, could you give value to the population? – Line 166, authors should add a reference. – In all the manuscript, when a cardinal point is preceded by “the” the first letter should be written in capital letter. – Line 349, it’s better to change “Please” to “we”. For references: – In the reference list, the citations should be written in the alphabetic order. – For some references with the same first author, they should be classified ..YEAr, YEArb. . ., example “Bhandri et al, 2019” – There is a disagreement between some references in the text and in the list, for example, Youn et al, 2016, and in the list 2011. BADC, 2017 in the text and 2014 on the list. – The reference SEDAC, 2018 is missing in the list. – The reference Bhanja et al, 2017 is missing in the list.

In conclusion, I recommend that this paper will be accepted after minor revisions.

Please also note the supplement to this comment:

<https://www.hydrol-earth-syst-sci-discuss.net/hess-2020-208/hess-2020-208-SC1-supplement.pdf>

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